

# DEPARTMENT OF TRANSPORTATION STATE OF GEORGIA

## OFFICE OF DESIGN POLICY & SUPPORT INTERDEPARTMENTAL CORRESPONDENCE

**FILE** P.I. # 522180-  
PEEDS-0545-00(024)

Toombs County  
GDOT District 5 - Jesup  
US 1/SR 4 Widening

**OFFICE** Design Policy & Support

**DATE** 4/20/2018

**FROM**  for Brent Story, State Design Policy Engineer

**TO** SEE DISTRIBUTION

**SUBJECT** APPROVED REVISED CONCEPT REPORT

Attached is the approved Revised Concept Report for the above subject project.

Attachment

**DISTRIBUTION:**

Hiral Patel, Director of Engineering  
Joe Carpenter, Director of P3  
Albert Shelby, Director of Program Delivery  
Darryl VanMeter, Assistant Director of P3/State Innovative Delivery Administrator  
Kim Nesbitt, Program Delivery Administrator  
Bobby Hilliard, Program Control Administrator  
Cindy VanDyke, State Transportation Planning Administrator  
Eric Duff, State Environmental Administrator  
Andrew Heath, State Traffic Engineer  
Angela Robinson, Financial Management Administrator  
Lisa Myers, State Project Review Engineer  
Monica Flournoy, State Materials Engineer  
Patrick Allen, State Utilities Engineer  
Benny Walden, Statewide Location Bureau Chief  
Andy Casey, State Roadway Design Engineer  
Attn: Carol Bowler, Design Group Manager  
Brad Saxon, District Engineer  
Troy Pittman, District Preconstruction Engineer  
Dallory Rozier, District Utilities Engineer  
Michelle Wright, Project Manager  
BOARD MEMBER - 12th Congressional District

**DEPARTMENT OF TRANSPORTATION  
STATE OF GEORGIA  
REVISED PROJECT CONCEPT REPORT**

|   |                                 |
|---|---------------------------------|
| Project Type: <u>Widening</u>             | P.I. Number: <u>522180-</u>     |
| GDOT District: <u>5</u>                   | County: <u>Toombs</u>           |
| Federal Route Number: <u>US 1</u>         | State Route Number: <u>SR 4</u> |
| Project Number: <u>EDS00-0545-00(024)</u> |                                 |

The proposed changes consist of the reduction of the depressed median for the typical section from 44' to 32' for the entire project, and a slight change in the location of the north terminus. The project south terminus is shifted to just south of George Hill Road (CR 106) to no longer include any part of the Toombs Central bypass.

**Submitted for approval:**

|  |                        |
|--|------------------------|
| <u>C. Andy Cuy</u><br>Consultant Designer & Firm or GDOT Concept/Design Phase Office Head & Office | <u>9/19/17</u><br>Date |
|--|------------------------|

|   |                     |
|---|---------------------|
| (N/A)<br>Local Government Sponsor <u>Hamberly W. T. Pabst</u> | Date <u>9-13-17</u> |
|---|---------------------|

|  |                     |
|--|---------------------|
| State Program Delivery Engineer <u>Michele Wright C.L.B.</u> | Date <u>8-24-17</u> |
|--|---------------------|

|                      |      |
|----------------------|------|
| GDOT Project Manager | Date |
|----------------------|------|

**Recommendation for approval:**

|   |                       |
|---|-----------------------|
| State Environmental Administrator <u>ERIC DUFF*/EKP</u> | Date <u>9/29/2017</u> |
|---|-----------------------|

|   |                        |
|---|------------------------|
| FOR State Traffic Engineer <u>ANDREW PEARSON*/EKP</u> | Date <u>10/10/2017</u> |
|---|------------------------|

|                       |      |
|-----------------------|------|
| State Bridge Engineer | Date |
|-----------------------|------|

|  |                        |
|--|------------------------|
| FOR District Engineer <u>BYRON COWART*/EKP</u> | Date <u>10/12/2017</u> |
|--|------------------------|

- ☐ MPO Area: This project is consistent with the MPO adopted Regional Transportation Plan (RTP)/Long Range Transportation Plan (LRTP).
- ☒ Rural Area: This project is consistent with the goals outlined in the Statewide Transportation Plan (SWTP) and/or is included in the State Transportation Improvement Program (STIP).

|  |                        |
|--|------------------------|
| State Transportation Planning Administrator <u>CINDY VAN DYKE*/EKP</u> | Date <u>10/11/2017</u> |
|--|------------------------|

*\* - RECOMMENDATION ON FILE*

## PLANNING, APPROVED CONCEPT, AND BACKGROUND

**Project Justification Statement:** US1/SR4 is the major north-south corridor in mid-east Georgia, and is part of the Governor's Road Improvement Program. The proposed multi-lane project of US1/SR4 would eliminate congestion and enhance traffic flow, while proposing to improve the operational characteristics and reduce the crash frequency and severity of crashes along US1/SR4.

**Existing conditions:** The current typical section of US1/SR4 in the project consists of 2-12' lanes (one in each direction) with open ditch drainage, and variable 6'-8' grassed shoulders, on right-of-way that varies between 100 ft. and 200 ft. There are no major intersections or structures along this project. There is one known U.S.T. site located along this project.

**Description of the approved concept:** According to the latest approved revised concept report in 2001, project EDS00-0545-00(024) proposed to widen and reconstruct US1/SR4 in Toombs County from the intersection of SR56 and EDS00-0545-00(0023) approximately 0.3 miles east of existing US1/SR4 and proceed north on new location for 0.6 miles in order to avoid three eligible historic resources, Toombs Central school and minimize impacts along US1/SR4. It would tie into existing US1/SR4 at CR108 / Paul Lockley Road and continue north as widening to the east side to CR322 / C H Slaton Road, then shift to widen on the west side and continue north to the existing SR15/SR29 intersection, where would transition back to widening on the east side and be completed at the ending terminus at CR117/Harndon Road -relocated SR15/SR29 intersection. The project length would be approximately 4.6 miles.

**Federal Oversight:** ☐ PoDI ☐ Exempt ☒ State Funded ☐ Other

**Projected Traffic as shown in the approved Revised Concept Report:** ADT or AADT  
Open Year (2008): 5500 Design Year (2028): 8000

**Updated Traffic:** ADT or AADT 24 HR T: 14 %  
Open Year (2019): 5600 Design Year (2039): 6800

**Functional Classification (Mainline):**  
Rural Principal Arterial

**VE Study anticipated:** ☐ No ☐ Yes ☒ Completed – Date: 7/21/2011  
VE Implementation letter attached.

## PROPOSED REVISIONS

| Approved Features:  | Proposed Features:   |
|---|--|
| The approved features include a 44 ft grass depressed median.<br>The location of the north terminus is at the intersection of US1/SR4 with SR15/29 new location.<br>The current project length is approximately 4.6 miles.<br>The current alignment begins at the new location of the intersection of SR56 with new location of | The depressed median width of the project would be changed from 44 ft to 32 ft.<br><br>The southern terminus of the project would begin just south of the intersection of US1/SR4 with George Hill Road (CR 106) at the beginning of the curve of existing US1/SR4, and continue north as holding the existing pavement as northbound lanes, and as widening to the west side of the project (southbound lanes), and end in tangent just south |

|  |  |
|--|--|
| <p>US1/SR4 under EDS00-0545-00(023), and proceeds north on new location for 0.6 miles before tying into existing US1/SR4 at CR108/Paul Lockley Rd and continues north as widening to the east side to CR322/C H Slayton Road. It then shifts over to west side widening and continues north to the existing SR15/29 intersection.</p>  | <p>of the existing SR15/29 intersection to be built under EDS00-0545-00(025). The project length would be approximately 3.6 miles.</p> |
| <p><b>Reason(s) for change:</b> Value Engineering Study Implementation to reduce median width, in order to reduce project cost, and also reduce the impact on environmentally sensitive areas.</p> <p>The north terminus is slightly shifted south to be on a geometric tangent, and avoid ending project on a curve and in the middle of a major intersection, and avoid traffic issues from building only part of it. The intersection is to be reconstructed and realigned under project EDS00-0545-00(025) ie PI#522190-.</p> <p>The alignment shift is made in order to avoid potential displacement of a recently expanded onion processing facility, in addition to the fact that the Herndon property is no longer considered eligible for the National Register of Historic Places.</p> <p>The south terminus for traffic control purposes is shifted to south of George Hill Road (CR106) at the beginning of the curve of existing US1/SR4.</p> |  |

**Design Variances and/or Exceptions needed:** A Design Variance to reduce the median width from 44 ft to 32 ft was approved on January 28, 2014.

## ENVIRONMENTAL AND PERMITS

**Potential environmental impacts of proposed revision:** The proposed decrease from a 44-foot median to a 32-foot median would not be expected to result in additional impacts. Special study addendums are underway due to study age and project changes and will incorporate the reduced median.

**Have proposed revisions been reviewed by environmental staff?** ☐ No ☒ Yes

**Environmental responsibilities (Studies/Documents/Permits):** All studies are outsourced, being performed and completed by consultants.

**Air Quality:**

|   |  |                              |
|---|--|------------------------------|
| Is the project located in a PM 2.5 Non-attainment area? | <input checked="" type="checkbox"/> No | <input type="checkbox"/> Yes |
| Is the project located in an Ozone Non-attainment area? | <input checked="" type="checkbox"/> No | <input type="checkbox"/> Yes |
| Is a Carbon Monoxide hotspot analysis required?         | <input checked="" type="checkbox"/> No | <input type="checkbox"/> Yes |

**Water Quality Requirements:** This is not an MS-4 project.

**Environmental Comments and Information:**

**NEPA:** Project is state funded.

**Ecology:** There are numerous ecological resources present within the project boundary. Reduction in the footprint would be expected to reduce impacts to ecological resources. Field work is ongoing and an ecology addendum will be prepared.

**Archeology:** There are archaeological resources present within the project boundary, including cemeteries. Reduction in the footprint would be expected to result in continued avoidance. Archaeology field work is ongoing and an archaeology addendum will be prepared.

**History:** There are historical resources present within the project boundary. Reduction in the footprint would be expected to reduce impacts at these resources. An HRSR addendum has been submitted and an AOE addendum will be prepared.

**Air Quality:** The reduction in the typical section is not expected to result in a need for further air analysis. A memo will be required to update the project file for the design changes as well as changes in policy since the last report.

**Noise Effects:** Project is state funded; noise levels will be determined for eligible historic structures only.

**Public Involvement:** There was a PHOH on August 9, 2007 illustrating the proposed alignment. A PIOH will be held after all required special studies have been completed.

## PROJECT COST AND ADDITIONAL INFORMATION

| Item                            | Estimated Cost         | Date of Estimate                                      | Funded By |
|---------------------------------|------------------------|---|-----------|
| Preliminary Engineering (PE):   | \$1,739,511.00         | <del>4/9/2013</del><br><i>Authorized [Signature]</i>  | State     |
| Environmental Mitigation:       | \$102,235.00           | 1/25/2018   |           |
| Base Construction Cost:         | \$12,980,526.79        |   |           |
| Engineering and Inspection:     | \$649,026.34           |   |           |
| Contingencies:                  | \$681,477.66           |   |           |
| Liquid AC Adjustment:           | \$816,735.69           |   |           |
| <u>Total Construction Cost:</u> | \$15,127,766.48        | 1/23/2018   | State     |
| Right-of-Way:                   | \$3,330,000.00         | <del>7/10/2017</del><br><i>Authorized [Signature]</i> | State     |
| Utilities (reimbursable costs): | \$1,935,489.00         | 1/25/2018   | State     |
| <b>TOTAL PROJECT COST:</b>      | <b>\$22,235,001.48</b> |   |           |

**Recommendation:** Recommend that the proposed revision to the concept be approved for implementation.

**Comments:** N/A

**Attachments:**

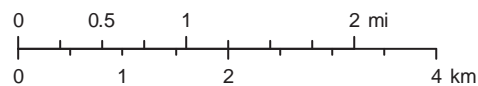
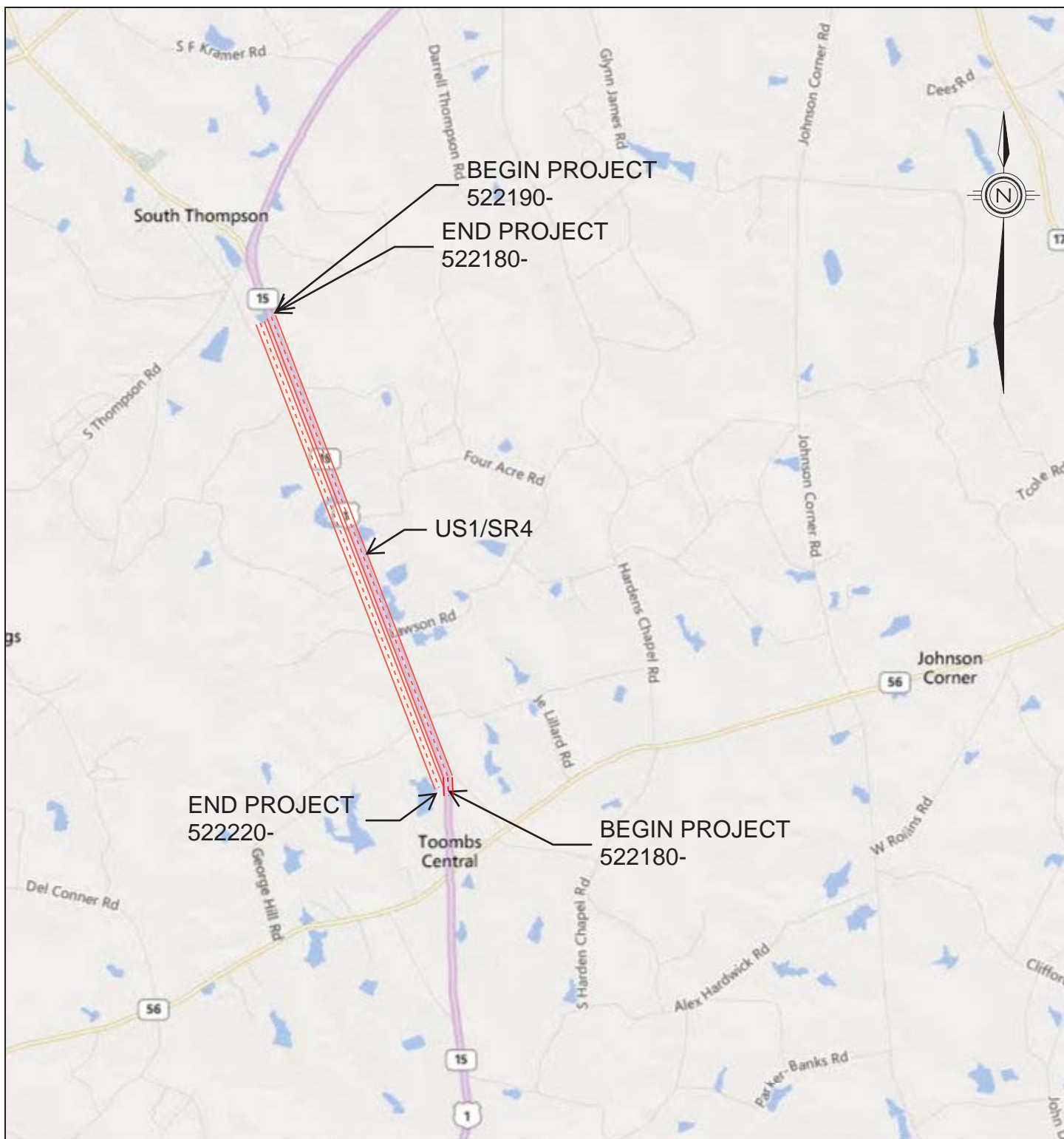
- Sketch map
- Cost Estimate(s)
- VE Implementation letter
- Design Variance Approval
- Notification of Concept Revision – US1/SR4 Improvement

## APPROVALS

Concur: *Nial Pirel*  
Director of Engineering

Approve: *Margaret B. Pirel*  
Chief Engineer

*4/17/18*  
Date



Project Location Map  
P.I. No. 522180-  
Toombs County, GA

# CONTINGENCY SUMMARY

|   |    |               |  |     |
|---|----|---------------|--|-----|
| <b>A. CONSTRUCTION COST ESTIMATE:</b>             | \$ | 12,980,526.79 | Base Estimate From CES   |     |
| <b>B. ENGINEERING AND INSPECTION (E &amp; I):</b> | \$ | 649,026.34    | Base Estimate (A) x  | 5 % |
| <b>C. CONTINGENCY:</b>                            | \$ | 681,477.66    | Base Estimate (A) + E & I (B) x                                  | 5 % |
|   |    |               | <a href="#">See % Table in "Risk Based Cost Estimation" Memo</a> |     |
| <b>D. TOTAL LIQUID AC ADJUSTMENT:</b>             | \$ | 816,735.69    | Total From Liquid AC Spreadsheet                                 |     |
| <b>E. CONSTRUCTION TOTAL:</b>                     | \$ | 15,127,766.48 | (A + B + C + D = E)  |     |

## REIMBURSABLE UTILITY COSTS

| UTILITY OWNER | REIMBURSABLE COST |
|---------------|-------------------|
|               |                   |
|               |                   |
|               |                   |
|               |                   |
|               |                   |
|               |                   |
|               |                   |
|               |                   |
| TOTAL         | \$ -              |

### ATTACHMENTS: (File Copy in the Project Cost Estimate Folder)

Detailed Cost Estimate Printout From TRAQS  
Liquid AC Adjustment Spreadsheet

## Detailed Cost Estimate

Time Processed: Jul-27-2017 11:53:51 AM

JOB NUMBER: 522180

FED/STATE EDS00-0545-00(024)

PROJECT  
NUMBER:

SPEC YEAR: 13

ITEM ALL\_2016Q2\_24MO

HISTORY:

DESCRIPTION: SR4/US1 FROM NORTH OF SR56 TO SOUTH OF SR29

ASSIGNED OFFICE OF ROADWAY DESIGN

CONTROL

GROUP:

## ITEMS FOR JOB 522180

## 0010 - ROADWAY

| Line Number   | Item     | Quantity  | Units | Price           | Description                              | Amount         |
|---------------|----------|-----------|-------|-----------------|--|----------------|
| 0005          | 150-1000 | 1.00      | LS    | \$170,000.00000 | TRAFFIC CONTROL - EDS00-0545-00(024)     | \$170,000.00   |
| 0010          | 150-5010 | 8.00      | EA    | \$7,822.68349   | TRAF CTRL,PORABLE IMPACT ATTN            | \$62,581.47    |
| 0015          | 153-1300 | 1.00      | EA    | \$84,000.00000  | FIELD ENGINEERS OFFICE TP 3              | \$84,000.00    |
| 0020          | 201-1500 | 1.00      | LS    | \$450,000.00000 | CLEARING & GRUBBING - EDS00-0545-00(024) | \$450,000.00   |
| 0025          | 205-0001 | 159000.00 | CY    | \$3.50000       | UNCLASS EXCAV                            | \$556,500.00   |
| 0027          | 206-0002 | 48300.00  | CY    | \$7.28787       | BORROW EXCAV, INCL MATL                  | \$352,004.12   |
| 0030          | 207-0203 | 400.00    | CY    | \$52.93370      | FOUND BK FILL MATL, TP II                | \$21,173.48    |
| 0032          | 455-1000 | 49500.00  | SY    | \$3.87354       | FILTER FAB/EMBANKMENT STAB               | \$191,740.23   |
| 0035          | 310-1101 | 82500.00  | TN    | \$22.33719      | GR AGGR BASE CRS, INCL MATL              | \$1,842,818.18 |
| 0040          | 318-3000 | 5700.00   | TN    | \$20.00000      | AGGR SURF CRS                            | \$114,000.00   |
| 0045          | 402-1812 | 15800.00  | TN    | \$72.72604      | RECYL AC LEVELING, INC BM&HL             | \$1,149,071.43 |
| 0050          | 402-3121 | 21070.00  | TN    | \$66.79314      | RECYL AC 25MM SP, GP1/2, BM&HL           | \$1,407,331.46 |
| 0055          | 402-3130 | 13650.00  | TN    | \$71.31517      | RECYL AC 12.5MM SP, GP2, BM&HL           | \$973,452.07   |
| 0060          | 402-3190 | 18200.00  | TN    | \$68.59332      | RECYL AC 19 MM SP, GP 1 OR 2, INC BM&HL  | \$1,248,398.42 |
| 0065          | 413-0750 | 27500.00  | GL    | \$2.39597       | TACK COAT                                | \$65,889.18    |
| 0070          | 432-5010 | 6000.00   | SY    | \$3.89823       | MILL ASPH CONC PVMT, VARB DEPTH          | \$23,389.38    |
| 0080          | 441-0016 | 4500.00   | SY    | \$38.92748      | DRIVEWAY CONCRETE, 6 IN TK               | \$175,173.66   |
| 0095          | 446-1100 | 45800.00  | LF    | \$3.05268       | PVMT REF FAB STRIPS, TP2, 18 INCH WIDTH  | \$139,812.74   |
| 0100          | 456-2015 | 9.00      | GLM   | \$938.91666     | INDENT. RUMB. STRIPS - GRND-IN-PL (SKIP) | \$8,450.25     |
| 0104          | 620-0100 | 3000.00   | LF    | \$28.72187      | TEMP BARRIER, METHOD NO. 1               | \$86,165.61    |
| 0135          | 634-1200 | 300.00    | EA    | \$105.39807     | RIGHT OF WAY MARKERS                     | \$31,619.42    |
| 0140          | 641-1100 | 100.00    | LF    | \$69.84232      | GUARDRAIL, TP T                          | \$6,984.23     |
| 0145          | 641-1200 | 7800.00   | LF    | \$16.88095      | GUARDRAIL, TP W                          | \$131,671.41   |
| 0150          | 641-5001 | 14.00     | EA    | \$839.75460     | GUARDRAIL ANCHORAGE, TP 1                | \$11,756.56    |
| 0155          | 641-5015 | 16.00     | EACH  | \$3,048.00000   | GUARDRL ANCHOR, TP 12A, 31 IN, TANG, E/A | \$48,768.00    |
| ROADWAY Total |          |           |       |                 |  | \$9,352,751.30 |

## 0020 - DRAINAGE

| Line Number | Item     | Quantity | Units | Price         | Description                    | Amount       |
|-------------|----------|----------|-------|---------------|--------------------------------|--------------|
| 0200        | 550-1180 | 5260.00  | LF    | \$39.47911    | STM DR PIPE 18,H 1-10          | \$207,660.12 |
| 0205        | 550-1240 | 520.00   | LF    | \$54.25137    | STM DR PIPE 24,H 1-10          | \$28,210.71  |
| 0210        | 550-1241 | 200.00   | LF    | \$54.39146    | STM DR PIPE 24,H 10-15         | \$10,878.29  |
| 0215        | 550-1300 | 1290.00  | LF    | \$59.90997    | STM DR PIPE 30,H 1-10          | \$77,283.86  |
| 0220        | 550-1360 | 340.00   | LF    | \$81.83218    | STM DR PIPE 36,H 1-10          | \$27,822.94  |
| 0225        | 550-2180 | 520.00   | LF    | \$33.92302    | SIDE DR PIPE 18,H 1-10         | \$17,639.97  |
| 0230        | 550-2240 | 80.00    | LF    | \$42.31883    | SIDE DR PIPE 24,H 1-10         | \$3,385.51   |
| 0234        | 550-2300 | 112.00   | LF    | \$39.78332    | SIDE DR PIPE 30,H 1-10         | \$4,455.73   |
| 0235        | 550-3318 | 8.00     | EA    | \$674.47570   | SAFETY END SECTION 18,STD,4:1  | \$5,395.81   |
| 0240        | 550-3324 | 8.00     | EA    | \$824.79749   | SAFETY END SECTION 24,STD,4:1  | \$6,598.38   |
| 0245        | 550-3330 | 8.00     | EA    | \$1,020.52764 | SAFETY END SECTION 30,STD,4:1  | \$8,164.22   |
| 0250        | 550-3336 | 2.00     | EA    | \$1,500.00000 | SAFETY END SECTION 36,STD,4:1  | \$3,000.00   |
| 0255        | 550-3418 | 40.00    | EA    | \$518.67541   | SAFETY END SECTION 18,SD,4:1   | \$20,747.02  |
| 0260        | 550-3424 | 6.00     | EA    | \$800.00000   | SAFETY END SECTION 24,SD,4:1   | \$4,800.00   |
| 0265        | 550-4118 | 38.00    | EA    | \$509.76667   | FLARED END SECT 18 IN, SIDE DR | \$19,371.13  |
| 0270        | 550-4218 | 120.00   | EA    | \$645.72493   | FLARED END SECT 18 IN, ST DR   | \$77,486.99  |
| 0275        | 550-4224 | 10.00    | EA    | \$760.85702   | FLARED END SECT 24 IN, ST DR   | \$7,608.57   |
| 0280        | 550-4230 | 18.00    | EA    | \$865.36829   | FLARED END SECT 30 IN, ST DR   | \$15,576.63  |
| 0285        | 550-4236 | 6.00     | EA    | \$1,277.83349 | FLARED END SECT 36 IN, ST DR   | \$7,667.00   |
| 0295        | 573-2006 | 2000.00  | LF    | \$20.87161    | UNDDR PIPE INCL DRAIN AGGR 6   | \$41,743.22  |
| 0300        | 611-9000 | 20.00    | EA    | \$771.37819   | CAPPING MINOR STRUCTURE        | \$15,427.56  |
| 0310        | 668-2100 | 60.00    | EA    | \$2,293.31670 | DROP INLET, GP 1               | \$137,599.00 |
| 0315        | 668-4300 | 6.00     | EA    | \$2,311.89498 | STORM SEW MANHOLE, TP 1        | \$13,871.37  |
| 0320        | 668-5000 | 6.00     | EA    | \$2,308.53244 | JUNCTION BOX                   | \$13,851.19  |
| 0330        | 500-3101 | 670.00   | CY    | \$653.75105   | CLASS A CONCRETE               | \$438,013.20 |
| 0335        | 500-3200 | 100.00   | CY    | \$482.12555   | CL B CONC                      | \$48,212.56  |
| 0340        | 500-3800 | 10.00    | CY    | \$1,059.29715 | CL A CONC, INCL REINF STEEL    | \$10,592.97  |
| 0345        | 500-3900 | 10.00    | CY    | \$900.00000   | CL B CONC, INCL REINF STEEL    | \$9,000.00   |

| Line Number                | Item     | Quantity | Units | Price          | Description   | Amount         |
|----------------------------|----------|----------|-------|----------------|---|----------------|
| 0350                       | 511-1000 | 63560.00 | LB    | \$0.92325      | BAR REINF STEEL   | \$58,681.77    |
| DRAINAGE Total             |          |          |       |                |   | \$1,340,745.72 |
| 0040 - SIGNING AND MARKING |          |          |       |                |   |                |
| Line Number                | Item     | Quantity | Units | Price          | Description   | Amount         |
| 0500                       | 636-1020 | 174.00   | SF    | \$15.43342     | HWY SGN,TP1MAT,REFL SH TP3                                | \$2,685.42     |
| 0505                       | 636-1033 | 540.00   | SF    | \$17.64500     | HWY SIGNS, TP1MAT,REFL SH TP 9                            | \$9,528.30     |
| 0510                       | 636-2070 | 1560.00  | LF    | \$6.71003      | GALV STEEL POSTS, TP 7                                    | \$10,467.65    |
| 0515                       | 636-2080 | 18.00    | LF    | \$10.29115     | GALV STEEL POSTS, TP 8                                    | \$185.24       |
| 0520                       | 636-2090 | 133.00   | LF    | \$7.99886      | GALV STEEL POSTS, TP 9                                    | \$1,063.85     |
| 0525                       | 652-0110 | 33.00    | EA    | \$36.44670     | PAVEMENT MARKING, ARROW, TP 1                             | \$1,202.74     |
| 0530                       | 652-0120 | 9.00     | EA    | \$50.00000     | PAVEMENT MARKING, ARROW, TP 2                             | \$450.00       |
| 0535                       | 652-5451 | 9598.00  | LF    | \$0.20391      | SOLID TRAF STRIPE, 5 IN, WHITE                            | \$1,957.13     |
| 0540                       | 652-5452 | 8958.00  | LF    | \$0.23743      | SOLID TRAF STRIPE, 5 IN, YELLO                            | \$2,126.90     |
| 0545                       | 653-1501 | 53969.00 | LF    | \$0.35791      | THERMO SOLID TRAF ST 5 IN, WHI                            | \$19,316.04    |
| 0550                       | 653-1502 | 53070.00 | LF    | \$0.32548      | THERMO SOLID TRAF ST, 5 IN YEL                            | \$17,273.22    |
| 0555                       | 653-1704 | 176.00   | LF    | \$7.45958      | THERM SOLID TRAF STRIPE,24,WH                             | \$1,312.89     |
| 0560                       | 653-3501 | 55142.00 | GLF   | \$0.23152      | THERMO SKIP TRAF ST, 5 IN, WHI                            | \$12,766.48    |
| 0565                       | 653-6004 | 4117.00  | SY    | \$3.62792      | THERM TRAF STRIPING, WHITE                                | \$14,936.15    |
| 0570                       | 653-6006 | 917.00   | SY    | \$3.76955      | THERM TRAF STRIPING, YELLOW                               | \$3,456.68     |
| 0575                       | 654-1001 | 133.00   | EA    | \$4.49835      | RAISED PVMT MARKERS TP 1                                  | \$598.28       |
| 0580                       | 654-1003 | 743.00   | EA    | \$4.29481      | RAISED PVMT MARKERS TP 3                                  | \$3,191.04     |
| 0585                       | 654-1010 | 24.00    | EA    | \$35.09379     | RAISED PVMT MARKERS TP 10                                 | \$842.25       |
| SIGNING AND MARKING Total  |          |          |       |                |   | \$103,360.26   |
| 0050 - EROSION CONTROL     |          |          |       |                |   |                |
| Line Number                | Item     | Quantity | Units | Price          | Description   | Amount         |
| 0600                       | 163-0232 | 55.00    | AC    | \$520.66376    | TEMPORARY GRASSING  | \$28,636.51    |
| 0605                       | 163-0240 | 1591.00  | TN    | \$144.61304    | MULCH   | \$230,079.35   |
| 0610                       | 163-0300 | 19.00    | EA    | \$1,425.16642  | CONSTRUCTION EXIT   | \$27,078.16    |
| 0615                       | 163-0501 | 5.00     | EA    | \$664.48277    | CONSTR AND REMOVE SILT CONTROL GATE, TP 1                 | \$3,322.41     |
| 0620                       | 163-0502 | 5.00     | EA    | \$501.35967    | CONSTR AND REMOVE SILT CONTROL GATE, TP 2                 | \$2,506.80     |
| 0625                       | 163-0503 | 22.00    | EA    | \$444.69507    | CONSTR AND REMOVE SILT CONTROL GATE, TP 3                 | \$9,783.29     |
| 0630                       | 163-0520 | 275.00   | LF    | \$20.63725     | CONSTR AND REMOVE TEMP PIPE SLOPE DRAIN                   | \$5,675.24     |
| 0635                       | 163-0528 | 8100.00  | LF    | \$4.34176      | CONSTR AND REM FAB CK DAM -TP C SLT FN                    | \$35,168.26    |
| 0645                       | 163-0531 | 6.00     | EA    | \$13,732.28659 | CONSTR & REM SEDIMENT BASIN,TP 1,STA NO- EDS-0545-00(024) | \$82,393.72    |
| 0650                       | 163-0550 | 40.00    | EA    | \$181.14029    | CONS & REM INLET SEDIMENT TRAP                            | \$7,245.61     |
| 0655                       | 165-0010 | 21200.00 | LF    | \$0.40683      | MAINT OF TEMP SILT FENCE, TP A                            | \$8,624.80     |
| 0660                       | 165-0030 | 9900.00  | LF    | \$0.60134      | MAINT OF TEMP SILT FENCE, TP C                            | \$5,953.27     |
| 0665                       | 165-0041 | 4050.00  | LF    | \$1.47842      | MAINT OF CHECK DAMS - ALL TYPES                           | \$5,987.60     |
| 0670                       | 165-0050 | 543.00   | LF    | \$3.00000      | MAINT OF SILT RETENTION BARRIER                           | \$1,629.00     |
| 0675                       | 165-0060 | 6.00     | EA    | \$1,204.72175  | MAINT OF TEMP SEDIMENT BASIN,STA NO - EDS-0545-00(024)    | \$7,228.33     |
| 0685                       | 165-0085 | 5.00     | EA    | \$154.58682    | MAINT OF SILT CONTROL GATE, TP 1                          | \$772.93       |
| 0690                       | 165-0086 | 5.00     | EA    | \$79.14198     | MAINT OF SILT CONTROL GATE, TP 2                          | \$395.71       |
| 0695                       | 165-0087 | 22.00    | EA    | \$65.53538     | MAINT OF SILT CONTROL GATE, TP 3                          | \$1,441.78     |
| 0700                       | 165-0101 | 19.00    | EA    | \$584.58194    | MAINT OF CONST EXIT                                       | \$11,107.06    |
| 0705                       | 165-0105 | 20.00    | EA    | \$86.96571     | MAINT OF INLET SEDIMENT TRAP                              | \$1,739.31     |
| 0710                       | 167-1000 | 2.00     | EA    | \$400.10266    | WATER QUALITY MONITORING AND SAMPLING                     | \$800.21       |
| 0715                       | 167-1500 | 24.00    | MO    | \$695.04317    | WATER QUALITY INSPECTIONS                                 | \$16,681.04    |
| 0720                       | 170-1000 | 543.00   | LF    | \$12.00000     | FLOAT SILT RETENTION BARRIER                              | \$6,516.00     |
| 0725                       | 171-0010 | 42400.00 | LF    | \$2.15530      | TEMPORARY SILT FENCE, TYPE A                              | \$91,384.72    |
| 0730                       | 171-0030 | 19800.00 | LF    | \$3.37249      | TEMPORARY SILT FENCE, TYPE C                              | \$66,775.30    |
| 0735                       | 441-0204 | 700.00   | SY    | \$38.48899     | PLAIN CONC DITCH PAVING, 4 IN                             | \$26,942.29    |
| 0740                       | 603-2024 | 70.00    | SY    | \$72.04304     | STN DUMPED RIP RAP, TP 1, 24                              | \$5,043.01     |
| 0745                       | 603-2180 | 399.00   | SY    | \$51.40408     | STN DUMPED RIP RAP, TP 3, 12                              | \$20,510.23    |
| 0750                       | 603-2182 | 70.00    | SY    | \$64.00269     | STN DUMPED RIP RAP, TP 3, 24                              | \$4,480.19     |
| 0755                       | 603-7000 | 399.00   | SY    | \$4.43866      | PLASTIC FILTER FABRIC                                     | \$1,771.03     |
| 0760                       | 700-6910 | 110.00   | AC    | \$1,425.70571  | PERMANENT GRASSING  | \$156,827.63   |
| 0765                       | 700-7000 | 360.00   | TN    | \$23.86367     | AGRICULTURAL LIME   | \$8,590.92     |
| 0775                       | 700-8000 | 110.00   | TN    | \$557.17551    | FERTILIZER MIXED GRADE                                    | \$61,289.31    |
| 0780                       | 700-8100 | 3000.00  | LB    | \$2.48769      | FERTILIZER NITROGEN CONTENT                               | \$7,463.07     |
| 0790                       | 441-0206 | 34232.00 | SY    | \$35.00000     | PLAIN CONC DITCH PAVING, 6 IN                             | \$1,198,120.00 |
| 0795                       | 716-2000 | 27138.00 | SY    | \$1.12438      | EROSION CONTROL MATS, SLOPES                              | \$30,513.42    |
| 0800                       | 711-0300 | 700.00   | SY    | \$4.56000      | TURF REINFORCING MATTING, TP 3                            | \$3,192.00     |
| EROSION CONTROL Total      |          |          |       |                |   | \$2,183,669.51 |

## TOTALS FOR JOB 522180

|  |                 |
|--|-----------------|
| ITEMS COST:                              | \$12,980,526.79 |
| COST GROUP COST:                         | \$0.00          |
| ESTIMATED COST:                          | \$12,980,526.79 |
| CONTINGENCY PERCENT:                     | 0.00%           |
| ENGINEERING AND INSPECTION:              | 0.00%           |
| ESTIMATED COST WITH CONTINGENCY AND E&I: | \$12,980,526.79 |

File Location: Div of Preconstruction > CES

CONFIDENTIALITY NOTICE: This document may contain confidential and/or privileged information. Any unauthorized duplication, disclosure,

distribution/retransmission of taking of any action in reliance upon the material in this document is strictly forbidden.

PROJ. NO. EDS00-0545-00(204)  
P.I. NO. 522180-  
DATE 1.23.2018

CALL NO. 0/00/2016

| INDEX (TYPE)  | DATE   | INDEX     |
|---------------|--------|-----------|
| REG. UNLEADED | Jan-18 | \$ 2.350  |
| DIESEL        |        |           |
| LIQUID AC     |        | \$ 383.00 |

Link to AC Index:  
<http://www.dot.ga.gov/PS/Materials/AsphaltFuelIndex>

#### LIQUID AC ADJUSTMENTS

PA=[((APM-APL)/APL)]xTMTxAPL

##### Asphalt

|  |          |     |    |        |          |    |            |
|--|----------|-----|----|--------|----------|----|------------|
| Price Adjustment (PA)                                |          |     |    |        | 789592.8 | \$ | 789,592.80 |
| Monthly Asphalt Cement Price month placed (APM)      | Max. Cap | 60% | \$ | 612.80 |          |    |            |
| Monthly Asphalt Cement Price month project let (APL) |          |     | \$ | 383.00 |          |    |            |
| Total Monthly Tonnage of asphalt cement (TMT)        |          |     |    |        | 3436     |    |            |

| ASPHALT   | Tons  | %AC  | AC ton |
|-----------|-------|------|--------|
| Leveling  | 15800 | 5.0% | 790    |
| 12.5 OGFC |       | 5.0% | 0      |
| 12.5 mm   | 13650 | 5.0% | 682.5  |
| 9.5 mm SP |       | 5.0% | 0      |
| 25 mm SP  | 21070 | 5.0% | 1053.5 |
| 19 mm SP  | 18200 | 5.0% | 910    |
|           | 68720 |      | 3436   |

##### BITUMINOUS TACK COAT

|  |          |     |    |        |              |    |           |
|--|----------|-----|----|--------|--------------|----|-----------|
| Price Adjustment (PA)                                |          |     |    |        | \$ 27,142.89 | \$ | 27,142.89 |
| Monthly Asphalt Cement Price month placed (APM)      | Max. Cap | 60% | \$ | 612.80 |              |    |           |
| Monthly Asphalt Cement Price month project let (APL) |          |     | \$ | 383.00 |              |    |           |
| Total Monthly Tonnage of asphalt cement (TMT)        |          |     |    |        | 118.1152754  |    |           |

##### Bitum Tack

| Gals  | gals/ton | tons       |
|-------|----------|------------|
| 27500 | 232.8234 | 118.115275 |

##### BITUMINOUS TACK COAT (surface treatment)

|  |          |     |    |        |   |    |   |
|--|----------|-----|----|--------|---|----|---|
| Price Adjustment (PA)                                |          |     |    |        | 0 | \$ | - |
| Monthly Asphalt Cement Price month placed (APM)      | Max. Cap | 60% | \$ | 612.80 |   |    |   |
| Monthly Asphalt Cement Price month project let (APL) |          |     | \$ | 383.00 |   |    |   |
| Total Monthly Tonnage of asphalt cement (TMT)        |          |     |    |        | 0 |    |   |

| Bitum Tack         | SY | Gals/SY | Gals | gals/ton | tons |
|--------------------|----|---------|------|----------|------|
| Single Surf. Trmt. |    | 0.20    | 0    | 232.8234 | 0    |
| Double Surf.Trmt.  |    | 0.44    | 0    | 232.8234 | 0    |
| Triple Surf. Trmt  |    | 0.71    | 0    | 232.8234 | 0    |

**TOTAL LIQUID AC ADJUSTMENT** \$ 816,735.69

## GDOT US 1 Reconstruction Waters of the U.S. Mitigation Cost Estimates

| PI #             | 522180              | 522190              | 522220              | 522200              | Total Credits                            | Cost Per Credit* | Total                           |
|------------------|---------------------|---------------------|---------------------|---------------------|--|------------------|---------------------------------|
| Wetland Credits* | 29.21               | 35.47               | 73.97               | 146.49              | 285.14                                   | \$3,500.00       | \$997,990.00 (wetland credits)  |
| Stream Credits*  | 0.00                | 6198.40             | 6671.60             | 5855.20             | 18725.20                                 | \$75.00          | \$1,404,390.00 (stream credits) |
|                  | <b>\$102,235.00</b> | <b>\$589,025.00</b> | <b>\$759,265.00</b> | <b>\$951,855.00</b> | <b>Project Total Mitigation Estimate</b> |                  | <b>\$2,402,380.00</b>           |

\* Required number of credits is a preliminary estimate based on worst case scenario impacts derived from preliminary design plans. No Avoidance/Minimization measures have been explored. Costs per credit are estimates based on an average of existing mitigation banks within the primary service area of the project. Actual mitigation credit requirements and associated costs will vary depending on further design changes, refinement of impact assessments, and actual credit costs at the time of permitting.

**DEPARTMENT OF TRANSPORTATION  
STATE OF GEORGIA**

**INTERDEPARTMENT CORRESPONDENCE**

FILE: PI 522180-, Toombs Co.  
SR 4/US 1 fm SR 56 to SR 29; Inc Clvt @  
Open Creek - TIA

OFFICE: District 5, Utilities

DATE: January 25, 2018



FROM: Dallery Rozier, District Utilities Manager

TO: Michelle Wright, Project Manager

**SUBJECT: UPDATED PRELIMINARY UTILITY COST ESTIMATE**

A review of utilities located on the above referenced project has been conducted without a design concept. Listed below is a breakdown of the anticipated reimbursable and non-reimbursable cost.

| <u>Utility Owner</u>                      | <u>Reimbursable</u>   | <u>Non- Reimbursable</u> | <u>Estimate Based on</u>      |
|---|-----------------------|--------------------------|-------------------------------|
| Altamaha EMC                              | \$1,696,981.00        | \$0.00                   |                               |
| Alma Telephone Co.                        | \$0.00                | \$0.00                   |                               |
| Uniti Fiber                               | \$0.00                | \$22,557.00              |                               |
| Systems & Solutions                       | \$90,592.00           | \$295,606.00             |                               |
| AT&T                                      | \$147,916.00          | \$504,443.00             |                               |
|   | \$0.00                | \$0.00                   |                               |
|   | \$0.00                | \$0.00                   |                               |
|   | \$0.00                | \$0.00                   |                               |
|   | \$0.00                | \$0.00                   |                               |
| <b>Total 0.00%</b>                        | <b>\$1,935,489.00</b> | <b>\$822,606.00</b>      |                               |
| <b>Department Responsibility 100.0%</b>   | <b>\$1,935,489.00</b> | <b>\$ 0.00</b>           |                               |
| <b>Local Sponsor Responsibility 0.00%</b> | <b>\$0.00</b>         | <b>\$ 0.00</b>           | <b>PFA Dated N/A with N/A</b> |

\*\* Indicates Potential Utility Aid Request from Local Gov't

Estimate is based on the best available information at the current stage, unforeseen prior rights information may be provided by the Utility Company at a later date that could cause some non-reimbursable costs to shift to the reimbursable cost column.

If additional information is needed, please contact Becky Simmons at 912-530-4399.

cc: Patrick Allen, P.E., State Utilities Manager  
Kerry Gore, Assistant State Utilities Administrator  
Yulonda Pride-Foster, Utilities Preconstruction Manager  
Stevonn Dilligard, Utilities Preconstruction Specialist  
Tonia Hinton, Utilities Preconstruction Specialist  
Vahid Munshi, Management Specialist

**DEPARTMENT OF TRANSPORTATION  
STATE OF GEORGIA**

-----  
**INTERDEPARTMENT CORRESPONDENCE**

**FILE:** EDS00-0545-00(023)(024)(025)(026) Toombs **OFFICE:** Engineering Services  
BHN00-0038-01(036)(037)  
P.I. Nos.: 522180 522185 522190  
522200 522220 522225  
US 1/SR 4 Corridor

**DATE:** July 22, 2011

**FROM:** Ronald E. Wishon, State Project Review Engineer *REW*

**TO:** Bobby K. Hilliard, PE, State Program Delivery Engineer  
Attn.: Michele Wright

**SUBJECT: IMPLEMENTATION OF VALUE ENGINEERING STUDY ALTERNATIVES**

The VE Study for the above projects was held April 4-7, 2011. Responses were received on July 21, 2011. Recommendations for implementation of Value Engineering Study Alternatives are indicated in the table below. The Project Manager shall incorporate the VE alternatives recommended for implementation to the extent reasonable in the design of the project.

| ALT #                     | Description  | Potential Savings/LCC | Implement | Comments   |
|---------------------------|--|-----------------------|-----------|--|
| PI Nos. 522220 and 522225 |  |                       |           |  |
| A-1                       | Reduce median width from 44 feet to 32 feet                              | \$378,000             | Yes       | This will be done.   |
| A-3                       | Use right of way to shoulder breakpoint and easements beyond             | \$190,000             | No        | The easements should be permanent to allow for maintenance of drainage along ditches and to provide for accommodation of utilities. The actual cost savings would be less than stated in the VE Study since the appraised value of the easement would be 75% of the ROW cost. (The VE Study used 50%). |
| B-1                       | Reduce bridge width from 38 feet to 36 feet for each of the 5 structures | \$1,057,000           | Yes       | This will be done.   |

|                      |   |           |     |   |
|----------------------|---|-----------|-----|---|
| C-2                  | Reduce paved shoulder width from 6 ½ ft to 4 ft                 | \$228,000 | No  | AASHTO states that arterials such as this one have a usable shoulder of at least 8 ft and that paving the usable shoulder is preferred. The 6 ½ ft shoulders should be retained for bicycle accommodation since this project is on the Heart of Georgia Regional Commission's regional bicycle route network.   |
| C-3                  | Reduce amount of side street work by tying into existing sooner | \$102,000 | Yes | This will be done where possible. The actual alignments may vary and the actual savings cannot be calculated without further design.  |
| C-5                  | Use reduced depth pavement for the medians and turn lanes       | \$324,000 | No  | No consideration was given to the cost of constructability. The contractor would be required to grade the median and turn lanes to a different typical than the through lanes. This change in constructability may offset the savings estimated by the VE Team.   |
| <b>PI No. 522180</b> |   |           |     |   |
| A-1                  | Reduce median width from 44 feet to 32 feet                     | \$357,000 | Yes | This will be done.  |
| A-3                  | Use right of way to shoulder breakpoint and easements beyond    | \$93,000  | No  | The easements should be permanent to allow for maintenance of drainage along ditches and to provide for accommodation of utilities. Slopes 3:1 or steeper will also require maintenance. The actual cost savings would be less than stated in the VE Study since the appraised value of the easement would be 75% of the ROW cost. (The VE Study used 50%). |

|                           |  |           |     |   |
|---------------------------|--|-----------|-----|---|
| C-2                       | Reduce paved shoulder width from 6 ½ ft to 4 ft                          | \$118,000 | No  | AASHTO states that arterials such as this one have a usable shoulder of at least 8 ft and that paving the usable shoulder is preferred. The 6 ½ ft shoulders should be retained for bicycle accommodation since this project is on the Heart of Georgia Regional Commission's regional bicycle route network.   |
| C-3                       | Reduce amount of side street work by tying into existing sooner          | \$345,000 | Yes | This will be done where possible. The actual alignments may vary and the actual savings cannot be calculated without further design.  |
| C-5                       | Use reduced depth pavement for the medians and turn lanes                | \$277,000 | No  | No consideration was given to the cost of constructability. The contractor would be required to grade the median and turn lanes to a different typical than the through lanes. This change in constructability may offset the savings estimated by the VE Team.   |
| PI Nos. 522190 and 522185 |  |           |     |   |
| A-1                       | Reduce median width from 44 feet to 32 feet                              | \$278,000 | Yes | This will be done.  |
| A-3                       | Use right of way to shoulder breakpoint and easements beyond             | \$70,000  | No  | The easements should be permanent to allow for maintenance of drainage along ditches and to provide for accommodation of utilities. There are ditches along 57% of the roadway. Slopes 3:1 or steeper will also require maintenance. The actual cost savings would be less than stated in the VE Study since the appraised value of the easement would be 75% of the ROW cost. (The VE Study used 50%). |
| B-1                       | Reduce bridge width from 38 feet to 36 feet for each of the 2 structures | \$114,000 | Yes | This will be done.  |

|                      |  |             |     |   |
|----------------------|--|-------------|-----|---|
| C-2                  | Reduce paved shoulder width from 6 ½ ft to 4 ft                  | \$92,000    | No  | AASHTO states that arterials such as this one have a usable shoulder of at least 8 ft and that paving the usable shoulder is preferred. The 6 ½ ft shoulders should be retained for bicycle accommodation since this project is on the Heart of Georgia Regional Commission's regional bicycle route network.   |
| C-3                  | Reduce amount of side street work by tying into existing sooner  | \$122,000   | Yes | This will be done where possible. The actual alignments may vary and the actual savings cannot be calculated without further design   |
| C-5                  | Use reduced depth pavement for the medians and turn lanes        | \$185,000   | No  | No consideration was given to the cost of constructability. The contractor would be required to grade the median and turn lanes to a different typical than the through lanes. This change in constructability may offset the savings estimated by the VE Team.   |
| <b>PI No. 522200</b> |  |             |     |   |
| A-1                  | Reduce median width from 44 feet to 32 feet                      | \$1,065,000 | Yes | This will be done.  |
| A-1.1                | Reduce median width from 44 feet to 20 feet with a cable barrier | \$1,455,000 | No  | This will not be done, because A-1 will be implemented.   |
| A-3                  | Use right of way to shoulder breakpoint and easements beyond     | \$1,798,000 | No  | The easements should be permanent to allow for maintenance of drainage along ditches and to provide for accommodation of utilities. There will be ditches along the majority of the roadway, and they must be maintained. Slopes 3:1 or steeper will also require maintenance. The actual cost savings would be less than stated in the VE Study since the appraised value of the easement would be 75% of the ROW cost. (The VE Study used 50%). |


|       |  |             |     |   |
|-------|--|-------------|-----|---|
| B-1   | Reduce bridge width from 38 feet to 36 feet for each of the 4 structures               | \$338,000   | Yes | This will be done.  |
| B-3   | Use MSE wall on railroad end of bridge to shorten bridge over railroad/US 280 crossing | \$283,000   | No  | There are more long-term maintenance issues with MSE walls constructed at bridge abutments than there are with typical spill through abutments. MSE wall abutments limit the possibility of future expansion for both the road being carried as well as the facility beneath the structure. Due to sequence of construction, coordination with subcontractors and equipment, bridge costs and wall costs are higher than the general bridge and wall costs for separate structures. |
| B-4   | Eliminate bridges at SR 30 and SR 292 and provide an at-grade crossing                 | \$7,278,000 | No  | Separating the traffic movements has been shown to reduce crash frequency and severity. The proximity of the track to SR 30/US 280 does not provide enough storage room for the traffic. This would impact operation of the bypass and SR 30/US 280 when vehicles turning right must stop for the train.  |
| B-4.1 | Eliminate bridges at SR 292  | \$2,785,000 | No  | The vertical curves required to bring the roadway to an at-grade intersection with SR 292 do not meet 45 mph. The speed design for the roadway will be reduced to 55 mph. See D-1.  |
| C-2   | Reduce paved shoulder width from 6 ½ ft to 4 ft  | \$175,000   | No  | AASHTO states that arterials such as this one have a usable shoulder of at least 8 ft and that paving the usable shoulder is preferred. The 6 ½ ft shoulders should be retained for bicycle accommodation since this project is on the Heart of Georgia Regional Commission's regional bicycle route network.   |
| C-3   | Reduce amount of side street work by tying into existing sooner                        | \$175,000   | Yes | This will be done where possible. The actual alignments may vary and the actual savings cannot be calculated without further design.  |

Implementation of Value Engineering Study Alternatives

Page 6

|     |  |           |     |   |
|-----|--|-----------|-----|---|
| C-5 | Use reduced depth pavement for the medians and turn lanes                    | \$324,000 | No  | No consideration was given to the cost of constructability. The contractor would be required to grade the median and turn lanes to a different typical than the through lanes. This change in constructability may offset the savings estimated by the VE Team.   |
| C-6 | Realign the by-pass to utilize more of the existing pavements south of Lyons | \$203,000 | No  | There is a mobile home community that lies in the path of the alignment proposed by this recommendation. Relocation cost for the mobile homes was not considered. Relocation of this community may present environmental justice issues. This alignment will require lake restoration as well as stream impacts which were not addressed in the VE study cost calculations. Also likely is the relocation of a home and/or impacts to a business. Utility relocation (approximately \$65,000) was not considered. |
| D-1 | Reduce design speed to 55 mph  | \$508,000 | Yes | This will be done.  |

The Office of Engineering Services concurs with the Project Manager's responses.

Approved:  Date: 7/27/2011  
Gerald M. Ross, PE, Chief Engineer

REW/LLM  
Attachments

c: Russell McMurry  
Bobby Hilliard/Stanley Hill/Michel Wright  
Russell McMurry/Jason McCook/David Acree/Angelo Yokaris  
Brad McManus/Frantz Boileau  
Paul Liles/Ben Rabun/Bill Duvall/Bill Ingalsbe  
Michael Hester  
Brad Saxon/Will Murphy/Bryan Czech  
Ken Werho  
Lisa Myers  
Matt Sanders

**DEPARTMENT OF TRANSPORTATION  
STATE OF GEORGIA**



**INTERDEPARTMENT CORRESPONDENCE**

**FILE** EDS00-0545-00(024)  
Toombs County  
PI No. 522180 -

**OFFICE** Roadway Design  
**DATE** January 14, 2014

Widening of US1/SR4 from SR56 to SR15/SR29

**FROM** C. Andy Casey, P.E., State Roadway Design Engineer

**TO** Brent A. Story, P.E., State Design Policy Engineer

**SUBJECT** Request for Design Variance – Typical Section: 32-ft Median Width

Approval of a Design Variance is requested for this project.

**Project Description**

Existing **US1/SR4** in the project area is a two-lane undivided roadway with 12-ft travel lanes, and variable 6-ft to 8-ft rural grass shoulders according to the 1991 Concept Report. The existing right-of-way width varies between approximately 100 and 200 ft.

The proposed project EDS00-0545-00(024) is located in Toombs County and consists of the widening, reconstruction and partial relocation of US1/SR4. The project begins on new location on SR56, approximately 0.3 miles east of US1/SR4 existing intersection with SR56, and proceed north on new location for 0.7 miles. The new alignment merges into the west side of the existing US1/SR4 approximately at CR108 /Paul Lockley Road. At existing SR15/SR29, widening would transition to the east side and be completed at the ending terminus, the CR117/Harndon Road – relocated SR15/SR29 intersection.

The approved typical section for US1/SR4 is a four-lane divided roadway with 12-ft travel lanes, 10-ft rural outside shoulders (6.5-ft paved, 3.5-ft grass), 6-ft inside shoulders (2-ft paved, 4-ft grass) and a 44-ft median width. This is a GRIP Corridor roadway and according with GDOT Policy, the **design speed would be 65 mph**. To accommodate the new slopes, the proposed ROW would vary between approximately 209 and 285 ft. The project length is approximately 4.5 miles.

### **Features Requiring a Design Variance**

A 32-ft depressed median width on the corridor's typical section has been recommended by the Value Engineering Study held in April 2011 (see savings in attachment). The desired median width for this GRIP corridor with a design speed of 65 mph is normally 44 ft. (Reference: *GDOT Design Policy Manual* dated 12/16/2013; Table 6.3). Therefore, a design variance will be required for the use of a 32-ft median.

According to the VE study 32-ft medians have been accepted and used in the past for this type of GRIP projects. A 32-ft median on this type of facility is acceptable per GDOT's Standards, and is also in compliance with AASHTO Guidelines. The reduced median will require 12 ft less right-of-way. According to the VE study, the reduced median will also reduce the amount of grassing, earthwork, clearing, grubbing, pavement at the crossover locations, and the required length of all cross drains, resulting in potential savings of approximately \$357,000.

### **Traffic Data**

| Roadway Section | AADT <sub>2019</sub> | AADT <sub>2039</sub> |
|-----------------|----------------------|----------------------|
| US1/SR4         | 5600                 | 6800                 |

### **Vehicle Crash Data**

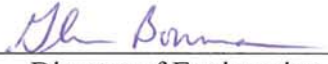
GEARS and GeoTraqs were used to research crash data. Neither service reported crashes, injuries or fatalities in the project vicinity. At this time, state averages for crashes, injuries and fatalities are unavailable for reporting.

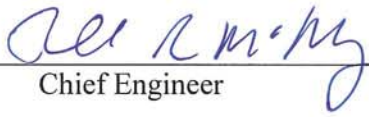
To address potential cross over crashes, the 32-ft median is within the range of clear zone recommended by the AASHTO Roadway Design Guide for this type of roadway. (Reference: *AASHTO Roadway Design Guide 4<sup>th</sup> Edition 2011, Table 3-1*). Therefore, no mitigation is recommended for the 32-ft median width.

**Recommendation**

For this project the AASHTO Highway Safety Manual (Predictive Method) indicates the potential for 1.248 total crashes per year per mile for a 4-lane divided roadway with a 44-ft median, and potentially 1.260 total crashes per year per mile for a similar roadway but a 32-ft wide median. When considering the comparative safety analysis for this section of US1/SR4 along with the benefits derived from the VE study, the cost savings to the project, environmental impacts, and still meeting the recommended clear zone requirements, the Office of Roadway Design recommends approval of the Design Exception for the reduction of the median width to 32 ft.

Please direct any comments or questions to Fletcher Miller, P.E., Design Engineer Group Manager at (404) 631-1652.

CONCUR:  1/24/14  
Director of Engineering Date

APPROVED:  1/28/14  
Chief Engineer Date

CAC:RDA:FCM:ady

Attachments:

- A. Proposed Project Location Map
- B. Typical Sections
- C. Traffic Data
- D. Highway Safety Manual Analysis
- E. VE Study Present Worth Savings

cc: Michelle Wright, P.E., Project Manager - Office of Program Delivery

**DEPARTMENT OF TRANSPORTATION**  
**STATE OF GEORGIA**

**INTERDEPARTMENTAL CORRESPONDENCE**

**FILE** EDS-545(24), Toombs County  
P.I. NO. 522180

**OFFICE** Environment/Location

**DATE** November 21, 2006

**FROM** *HDK/DRP*  
Harvey D. Keeper, State Environmental/Location Engineer

**TO** Distribution

**SUBJECT** Notification of Concept Revision - US 1/SR 4 Improvement

**Description of the approved concept:** The approved concept for EDS-545(24) in Toombs County is proposed to widen and reconstruct US 1/SR 4 in Toombs County from SR 56 to SR 15/SR 29. The approved concept would begin at the proposed new intersection of SR 56 and EDS-545(23), approximately 0.3 miles east of existing US 1/SR 4 and proceed north on new location for 0.6 miles. It would tie into existing US 1/SR 4 at CR 108/Paul Lockley Road and continue north as east side widening, holding existing pavement to CR 322/C. H. Slayton Road. It would then shift to west side widening, holding existing right-of-way to avoid impacting the Herndon property, which is eligible for the National Register of Historic Places, and continue north to the existing SR 15/SR 29 intersection. At existing SR 15/SR 29, widening would transition to the east side and be completed at the ending terminus, CR 117/Herndon Road and the relocated SR 15/SR 29 intersection. The typical section would be four 12 foot lanes with a 44 foot depressed grassed median and open ditch drainage. Existing right-of-way along US 1/SR 4 varies between 100 feet and 200 feet. The proposed right-of-way would vary from 209 feet to 285 feet for the length of the project. The speed design would be 65 mph, and access would be by permit along the existing roadway and partially controlled on new location. The project length would be approximately 4.6 miles.

The approved concept for EDS-545(24) has been revised as described below:

- In order to avoid the potential displacement of a recently expanded onion processing facility, the approved east side widening, holding existing pavement from CR 108/ Paul Lockley Road to CR 322/C. H. Slayton Road is now proposed to be west side widening, holding existing pavement.
- The Herndon property is no longer considered eligible for the National Register of Historic Places. The approved west side widening holding existing US 1/SR 4 right-of-way from CR 322/C. H. Slayton Road to existing SR 15/SR 29 is now proposed to be west side widening, holding existing US 1/SR 4 pavement. The alignment would proceed from existing SR 15/SR 29 to the projects end as discussed in the description of the approved concept.

If you have any questions concerning this revision to the concept, please contact Keith Posey at (404) 699-4463.

HDK/DRP/mhb

**Attachments:** Copy of Concept Revision

**Distribution:**

**Babs Abubakari**, State Program Delivery and Consultant Design Engineer

**Mike Thomas**, Tennille District Engineer

**Ken Thompson**, Assistant State Environment/Location Engineer

**Susie Knudson**, Assistant State Environment/Location Engineer; 6 copies